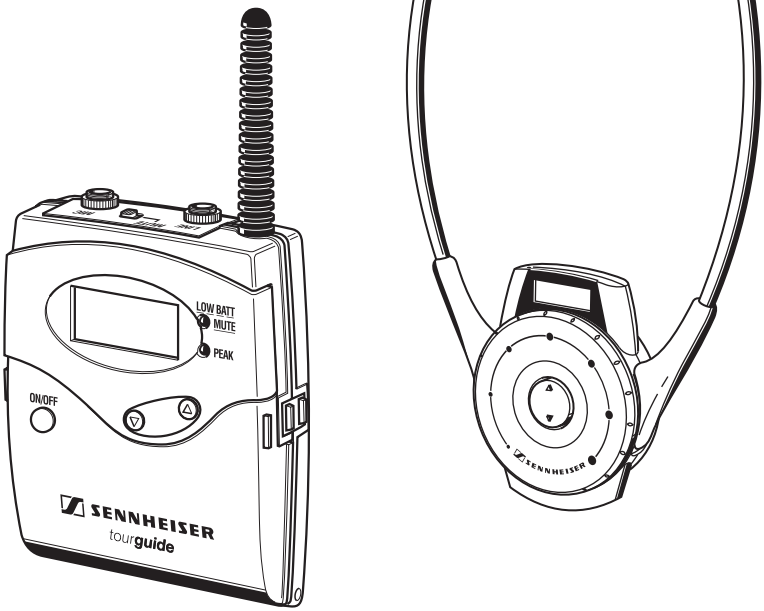
SENNHEISER

Tourguide System 2020

Instructions for use



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Thank you for choosing Sennheiser!

We have designed this product to give you reliable operation over many years. Over 60 years of accumulated expertise in the design and manufacture of high-quality electro-acoustic equipment have made Sennheiser a world-leading company in this field.

Please take a few moments to read these instructions carefully, as we want you to enjoy your new Sennheiser products quickly and to the fullest.

Safety instructions

These instructions for use contain important safety information.

Read these instructions.

Keep these instructions in a safe place. Always include these instructions when passing the system on to third parties.

Heed all warnings.

Follow all instructions.

Intended use of the system

Intended use includes that are using the system within the operating conditions as described in these instructions.

Improper use means use of the system other than as described in these instructions or under operating conditions which differ from those described in these instructions.

Operating the EZL 2020-20 L charging case

Use the device in dry rooms only. To reduce the risk of fire or electric shock, do not expose the device to rain or moisture. Objects filled with liquids, such as vases, must not be placed on the device. Do not use the device near water.

Never spill liquids of any kind onto the device. Should spillage occur, unplug the device and have it checked by a technician.

Never push objects of any kind through openings of this device as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock.

Ensure sufficient ventilation. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as central heating radiators, electric heaters, stoves, or other devices that produce heat. Keep the device away from direct sunlight and similar sources of heat.

The EZL 2020-20 L charging case is a Class 1 device. It must only be connected to properly grounded power outlets.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

This device must be operated only from the type of power supply indicated on the marking label. If you are not sure of the type of power supply to your building, consult your dealer or local power company.

Do not overload wall outlets and extension cables as this may result in fire and electric shock.

Protect the mains cable from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the device.

Only use attachments/accessories specified by Sennheiser.

Use only with the cart, stand, tripod, bracket, or table specified by Sennheiser, or sold with the device. When a cart is used, use caution when moving the cart/ device combination to avoid injury from tip-over.

Unplug the device during lightning storms or when unused for long periods of time.

Servicing

No user serviceable parts inside! Do not attempt to service devices yourself as opening or removing covers may expose dangerous voltage or other hazards. If devices are opened by customers in breach of this instruction, the warranty becomes null and void.

Refer all servicing to qualified service personnel. Servicing is required when the devices have been damaged in any way, such as mains cable or plug is damaged, liquid has been spilled or objects have fallen into the devices, the devices have been exposed to rain or moisture, do not operate normally, or have been dropped.

Clean only with dry cloth.

Symbols on adhesive labels attached to the EZL 2020-20 L charging case

The adhesive label shown on the left is attached to top of the device. The symbols on this label have the following meaning:

This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the device's enclosure that may be of sufficient magnitude to constitute risk of fire or electric shock.

This symbol is intended to alert the user to the risk of electric shock if the device is opened. There are no user serviceable parts inside. Refer servicing to qualified personnel only.

This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying this device.

Attention! High Volume!

This is a professional transmission system. Commercial use is subject to the rules and regulations of the trade association responsible. Sennheiser, as the manufacturer, is therefore obliged to expressly point out possible health risks arising from use.

This system is capable of producing sound pressure exceeding 85 dB(A). 85 dB(A) is the sound pressure corresponding to the maximum permissible volume which is by law (in some countries) allowed to affect your hearing for the duration of a working day. It is used as a basis according to the specifications of industrial medicine. Higher volumes or longer durations can damage your hearing. At higher volumes, the duration must be shortened in order to prevent damage. The following are sure signs that you have been subjected to excessive noise for too long a time:

- You can hear ringing or whistling sounds in your ears.
- You have the impression (even for a short time only) that you can no longer hear high notes.

Safety instructions for Li-poly and NiMH rechargeable batteries and batteries

If abused or misused, rechargeable batteries may leak. In extreme cases, they may even present

- a heat hazard,
- a fire hazard,
- a leakage hazard,
- an explosion hazard,
- a smoke or gas hazard.

Sennheiser does not accept liability for damage arising from abuse or misuse.

Keep away from children.

Do not heat above 70°C/ 158°F, e.g. do not expose to sunlight or throw into a fire.

Do not expose to moisture.

Do not short-circuit.

Do not mutilate or dismantle.

Do not get fully charged but unpacked rechargeable batteries mixed up.

Do not continue to use defective rechargeable batteries.

Only use original Sennheiser rechargeable batteries.

Observe correct polarity.

Switch rechargeable battery-powered devices off after use.

Only charge rechargeable batteries with the appropriate Sennheiser chargers.

When not using rechargeable batteries for extended periods of time, charge them regularly (about every three months).

Only charge rechargeable batteries at ambient temperatures between 10 °C and 40 °C.

Immediately remove rechargeable batteries from obviously defective devices.

Dispose of devices with rechargeable batteries at special collection points or return them to your specialist dealer.

Additional safety instructions for the BA 2015 accupack and for batteries

Do not solder.

Immediately remove flat batteries/ rechargeable batteries from the device.

System components

The Tourguide System 2020 D consists of the following components which are available from your Sennheiser agent:

- 1 EZL 2020-20 L charging case including instructions for use of the overall system
- 1 SK 2020 D bodypack transmitter
- HDE 2020 D stethoset receivers
- 1 BA 2015 accupack
- 1 mains cable
- 1 microphone (see next section)

Overview of the system

The Tourguide System 2020 D offers optimum digital speech transmission for guided tours e.g. in factories or museums. The use of RF transmission allows freedom of movement for all members of the group. Six preset intermodulation-free receiving frequencies offer high flexibility and adaptability.

The SK 2020 D bodypack transmitter

You can connect one of the following Sennheiser microphones (not included) to the transmitter:

- Clip-on microphones:
  ME 2-N, ME 4-N, MKE 2-EW GOLD
- Headmics:
  ME 3-N, HSP 2-EW, HSP 4-EW, HS 2-EW
- Hand-held mircophones with connecting cable:
  e 815, e 825, e 835, e 840, e 845

In addition, you can connect any audio source (e.g. a flash / MP3 player) to the transmitter.

The HDE 2020 D stehoset receivers

The stethoset receivers are easy to use and comfortable to wear. The built-in LC display shows all the important information at a glance (receiving channel, reception quality, charging status of the built-in Lithium-polymer rechargeable battery as well as the currently set volume). The rocker button allows fast and easy setting of the desired channel.

The system can be expanded at any time by adding additional stethoset receivers.

The EZL 2020-20 L charging case

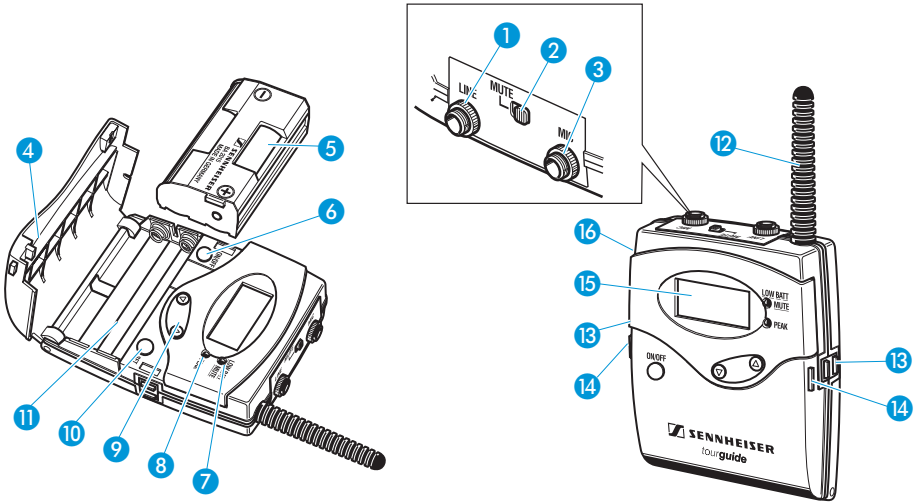
The charging case simultaneously recharges up to 20 stethoset receivers with their built-in rechargeable batteries, as well as the bodypack transmitter with the BA 2015 accupack inserted plus an additional spare accupack. The channel copy function lets you set all receivers to the same channel at the press of a button.

Additional features of the charging case:

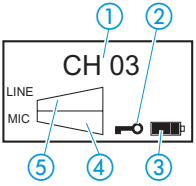
- Quick charge of accupacks.
- Automatic detection of full charge and subsequent switching to trickle charging so the accupacks can remain in the charger even when they have been fully charged.
- Highest possible operational reliability, since temperature and voltage of the accupacks are monitored during charging.
- Long accupack service life due to overcharge protection and recovery of deep-discharged accupacks.

The operating controls

SK 2020 D bodypack transmitter

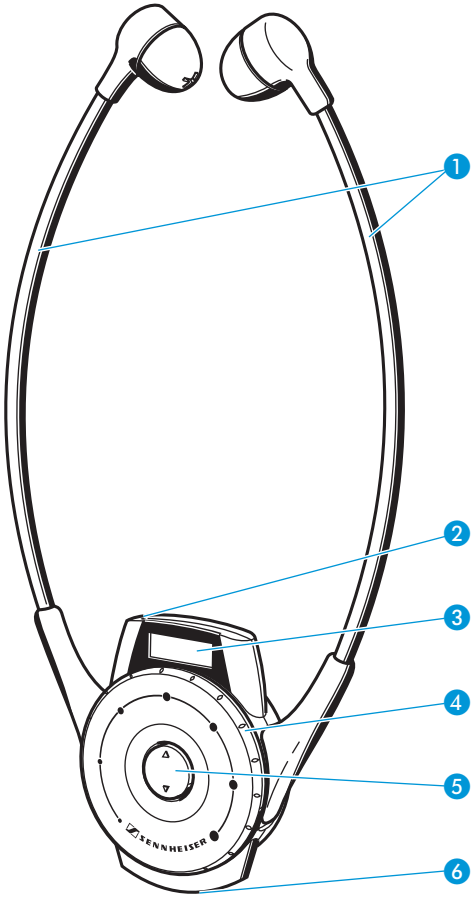


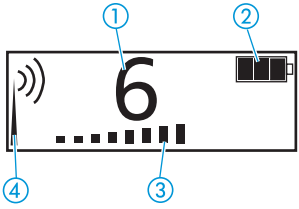
1. Line input
2. MUTE switch
3. Microphone input
4. Battery compartment cover
5. BA 2015 accupack
6. ON/OFF button
   (under battery compartment cover)
7. Red LED LOW BATT/MUTE
8. Yellow LED PEAK
9. ▲/▼ rocker button
10. SET button
    (under battery compartment cover)
11. Battery compartment
12. Antenna
13. Charging contacts
14. Battery compartment release buttons
15. LC Display
16. Belt clip
    (on the back of the transmitter)



1. Channel display
2. Lock mode icon
3. 4-step battery status indication
4. MIC level display
5. LINE level display

HDE 2020 D stethoset receiver

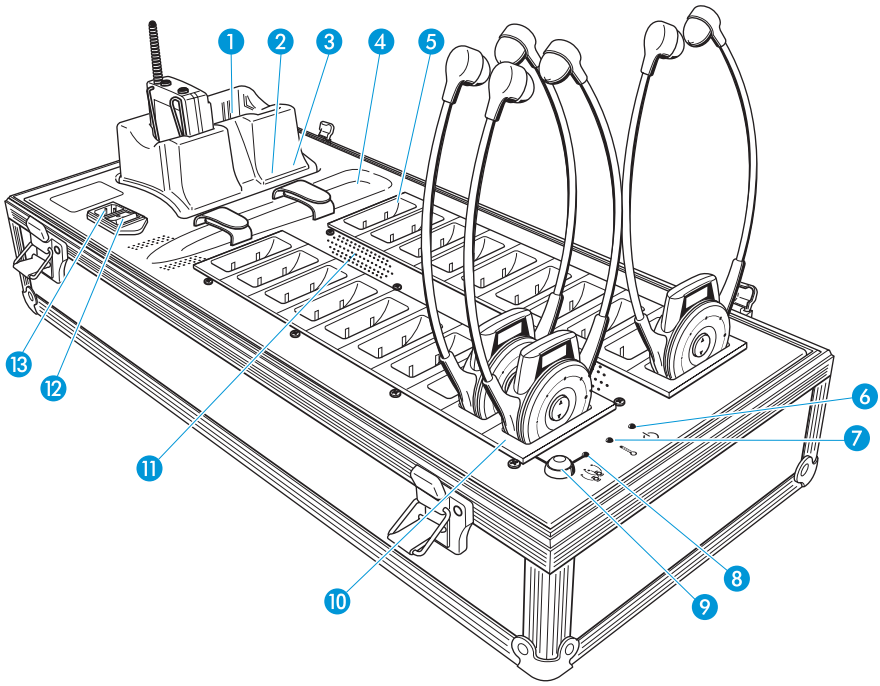




1. Earbows
2. Red/green LED for charging status
3. LC display
4. Volume control
5. ▲/▼ rocker button for channel selection
6. Charging contacts

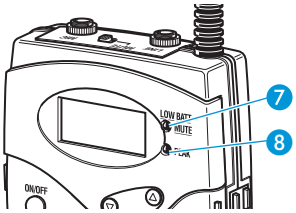
① Channel display
② 4-step battery status display
③ Volume display
④ RF signal indication

EZL 2020-20 L charging case



1. Charging compartments for accupack/transmitter
2. Red LED CHARGE
3. Green LED READY
4. Storage place for one microphone
5. Charging compartments for receivers (slaves)
6. LED POWER
7. LED TEMP ERROR
8. LED COPY AVAILABLE
9. COPY button
10. Charging compartment with channel copy function (master)
11. Air vents
12. Mains switch
13. IEC mains socket

Indications and displays on the transmitter

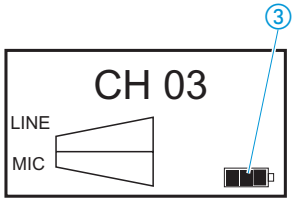


Operation and battery status indication

The red LED LOW BATT/MUTE 7 provides information on the current operating state of the transmitter:

Red LED off:

The transmitter is switched on and the capacity of the batteries/BA 2015 accupack is sufficient.



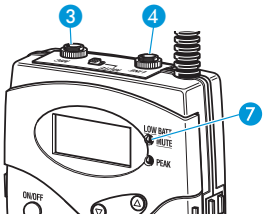
Red LED flashing:

The batteries are/the BA 2015 accupack is going flat (LOW BATT). In addition, the 4-step battery status display ③ on the LC display provides information on the remaining battery/BA 2015 accupack capacity.

AF peak indication

The yellow LED PEAK 8 lights up when the transmitter's audio input is overmodulated.

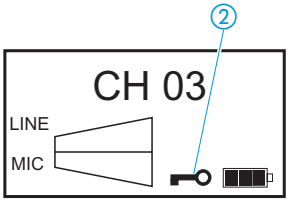
If the transmitter's audio input level is excessively high, the sound of the receivers may be distorted. In order to avoid distortion in the receivers, reduce the sensitivity of the transmitter's line and/or microphone input (see "Changing the sensitivity of the line input" on page 34 and "Changing the sensitivity of the line input" on page 34).



MUTE display

The red LED LOW BATT/MUTE 7 lights up as long as the transmitter's microphone input is muted (see "Muting the transmitter" on page 25).

Note:
The muting function (MUTE) mutes the microphone input 3 but not the line input 4.



Lock mode icon

The lock mode icon ② appears on the LC display when the lock mode is activated (see "Activating/deactivating the lock mode" on page 37).

LC display backlighting

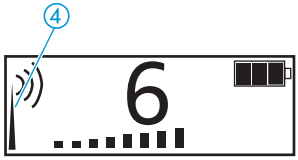
After pressing a button, the LC display remains backlit for approx. 15 seconds.

Display of the energy saving mode

When there is no audio signal for five minutes, the transmitter automatically switches to energy saving mode and "CH OFF" appears on the display.

When an audio signal reaches the transmitter, it switches back to normal operation.

Indications and displays on the receiver



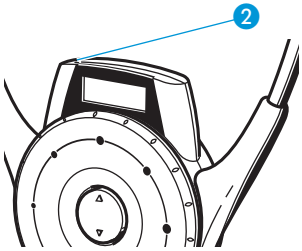
RF signal indication

The RF signal indication ④ (tower with radio waves) on the LC display provides information on the RF signal reception:

Tower with radio waves:
The received RF signal is sufficiently strong.

Tower without radio waves:
No RF signal is being received on the selected channel.

No tower, no radio waves:
The receiver is in stand-by mode. You can, however, change the settings on the receiver.



Charging control LED

During charging, the LED 2 provides information on the charging status of the receiver's built-in rechargeable battery.

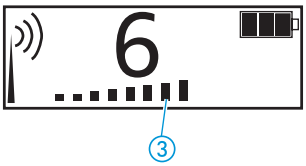
LED lights up red:
The built-in rechargeable battery is being charged.

LED lights up green:
The built-in rechargeable battery is fully charged. The receiver is now ready for operation.

LED slowly flashes red:
The temperature of the built-in rechargeable battery is not within the admissible range (3–40 °C). The charging process is being interrupted until the temperature is again within the admissible range.

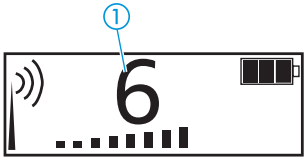
LED lights up yellow/orange:
The built-in rechargeable battery is defective. Please contact your Sennheiser agent.

Volume display



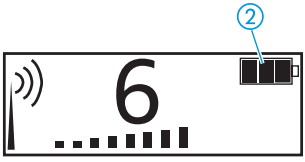
The volume display ③ on the LC display provides information on the current volume.

Channel display



The channel display ① on the LC display provides information on the current channel.

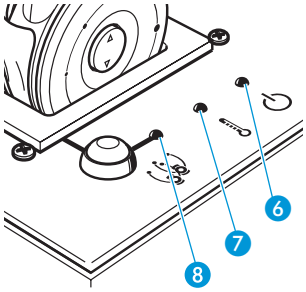
Battery status display



The 4-step battery status display ② on the LC display provides information on the remaining capacity of the receiver's built-in rechargeable battery.

Shortly before the rechargeable battery is completely discharged, the display backlighting flashes, indicating that the receiver will soon switch off automatically.

Indications and displays on the charging case

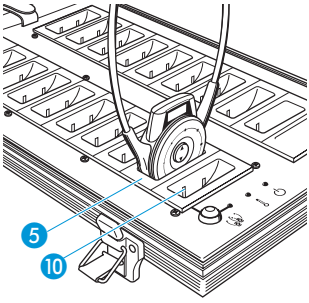


Operation indication

The LED POWER 6 lights up as long as the mains supply is switched on.

Temperature indication

The LED TEMP ERROR 7 lights up if the temperature in the charging case gets too high and will remain on until the temperature drops to a safe leve. All charging processes are being interrupted until the temperature drops to a safe level.



LED indication for “automatic copying“ function

The LED COPY AVAILABLE 8 lights up green when the “automatic copying“ function is available. This happens

- when a switched-on receiver is placed into the charging compartment with channel copy function (master) 10

and

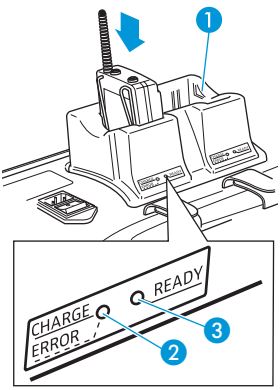
- at least one receiver is placed into one of the other receiver charging compartments (slaves) 5.

The LED COPY AVAILABLE 8 goes off when the “automatic copying“ function is not available. This happens

- when the receiver in the charging compartment with channel copy function (master) 10 is switched off

or

- when the receiver is removed from the charging compartment with channel copy function (master) 10.



LED indication for charging compartments for BA 2015 accupack/transmitter

Each charging compartment for accupack/transmitter 1 has an LED CHARGE 2 and an LED READY 3 which indicate the following operating states:

No LED lit:

The charging compartment for accupack/transmitter 1 is ready for operation but empty.

Or:

A transmitter without accupack is placed into the charging compartment.

Red LED CHARGE 2 lit:

The accupack is being charged.

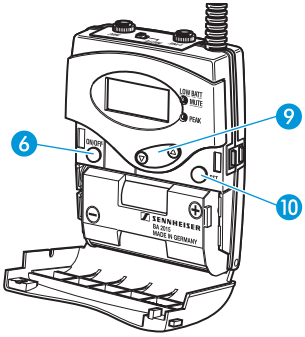
Green LED READY 3 lit:

The accupack is fully charged and the charging case has switched to trickle charging.

Green LED READY 3 lights up briefly and then goes off:

The transmitter is powered by standard batteries which cannot be recharged.

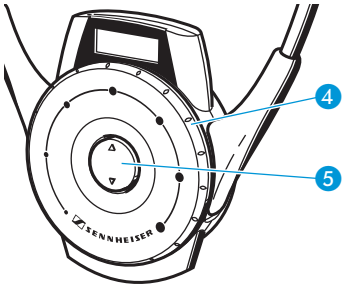
The functions of the transmitter operating controls



Operating control	Mode*	Function
ON/OFF button 6	Switched off	Pressing the button: Switches the transmitter on
	Standard display	Pressing the button for approx. 3 seconds: Switches the transmitter off
	Selection mode	Cancels the selection and returns to the standard display
	Setting mode	Cancels the entry and returns to the selection mode without storing the changes made
SET button 10	Standard display	Changes to the selection mode
	Selection mode	Changes to the setting mode of the selected menu
	Setting mode	Stores the setting and returns to the selection mode (“STORED” is displayed briefly)
	Lock mode activated	Changes directly to the “LOCK” menu where you can deactivate the lock mode
▲/▼ rocker button 9	Standard display	No function
	Selection mode	Changes to the previous menu (▲) or change to the next menu (▼)
	Setting mode	Increases (▲) or reduces (▼) the setting of the selected menu or switches the menu on (on) or off (off)

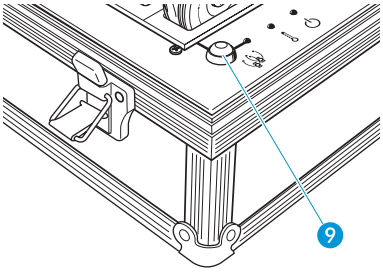
* For information on the menu areas ‘‘standard display’’, ‘‘selection mode’’ and ‘‘setting mode’’, please see ‘‘Overview of the operating menu’’ on page 41.

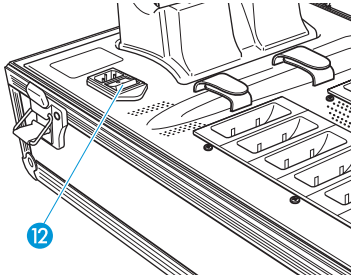
The functions of the receiver operating controls



Operating control	Function
Volume control 4	Turning the volume control: Changes the volume
▲/▼ rocker button 5 for channel selection	Pressing the rocker button: Changes to the next channel (▲) or changes to the previous channel (▼)
Earbows	Pulling the earbows apart: Switches the stethoset receiver on

The functions of the operating controls of the charging case

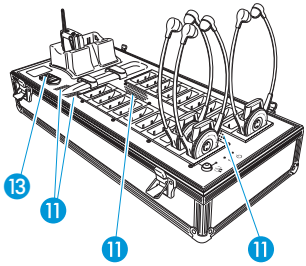




Operating control	Function
Mains switch 12	Switching the charging case on/off
COPY button 9	Starting the channel copy function (see page 32)

Putting the components into operation

Setting up the charging case



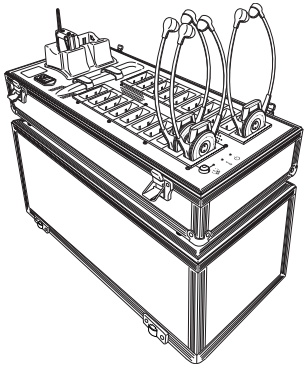
Note:
The charging case as well as the accupacks and the receivers' built-in rechargeable batteries will get hot during charging. Please ensure the following so that the generated heat can dissipate:

- The air vents 11 of the charging case must not be covered or blocked.
- The charging case must be kept away from heat sources and must never be exposed to direct sunlight.
- During charging, do not put the case cover on the charging case.

The charging case has four plastic feet to ensure that it cannot slip on the surface on which it is placed.

Caution!

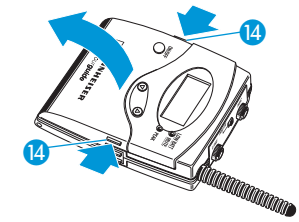
Some furniture surfaces have been treated with varnish, polish or synthetics which might cause stains when they come into contact with other synthetics. Despite a thorough testing of the synthetics used by us, we cannot rule out the possibility of staining.

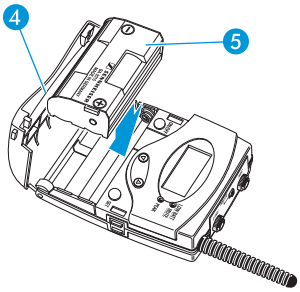


- ▶ Place the charging case on a flat, even surface.
- ▶ Connect the supplied mains cable to the IEC mains socket 13 on the charging case.
- ▶ Connect the cable to the mains.

Note:
The case cover can be used as a stand for the charging case (see diagram on the left).

Inserting and replacing the transmitter batteries / accupack



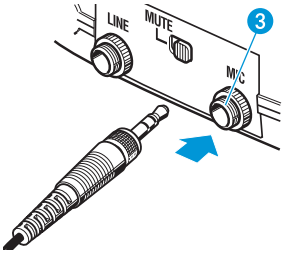


For powering the transmitter, you can either use the rechargeable BA 2015 accupack 5 or two 1.5 V AA size batteries. NB: Do not use any other rechargeable batteries!

- Open the battery compartment by pressing the two release buttons 14 and open the cover 4.
- Insert the batteries or the BA 2015 accupack 5 as shown in the diagram on the left. Please observe correct polarity when inserting the batteries/accupack.
- Close the battery compartment cover 4.

Connecting the microphone

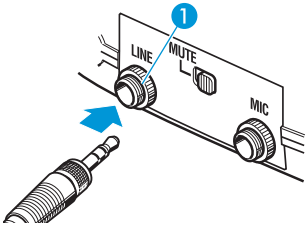
Note:
Suitable Sennheiser microphones are listed on page 9.



- Connect the microphone to the transmitter's microphone input 3.
- Lock the microphone plug by screwing down the coupling ring.
- Adjust the sensitivity of the microphone input as described on page 35.

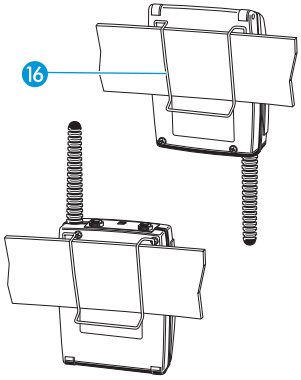
Connecting external audio sources

You can connect an external audio source such as a CD player, MP3 player, tape player, etc. to the transmitter. (Please note that you cannot connect a second microphone.) Both signals – the microphone input signal and the line input signal – are mixed together equally in the transmitter.



- Connect the line output of the external audio source to the transmitter's line input 1.
- Lock the plug by screwing down the coupling ring.
- Switch the line input on as described on page 33.
- Adjust the sensitivity of the line input as described on page 34.

Attaching the transmitter to clothing



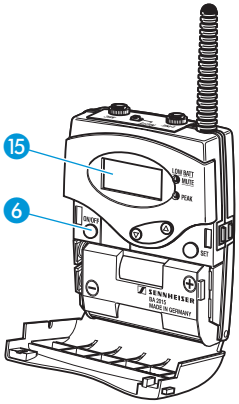
The transmitter is attached to clothing (e.g. belt, waistband) with the supplied belt clip 16.

The clip is detachable so that you can also attach the transmitter with the antenna pointing downwards. To do so, withdraw the clip 16 from its fixing points and attach it the other way round.

Using the components

Switching the devices on/off

Switching the transmitter on/off



To switch the transmitter on:

▶ Briefly press the ON/OFF button 6.
The LC display 15 indicates the device name and then switches to the standard display.

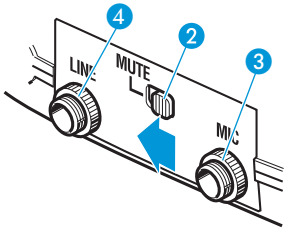
To switch the transmitter off:

▶ Press and hold the ON/OFF button 6 until "OFF" appears on the display.

Note:
Remove the batteries or the accupack when the transmitter will not be used for extended periods of time.

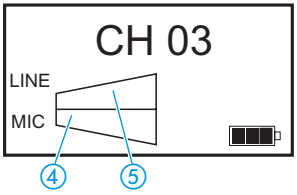
Muting the transmitter

To temporarily mute the transmitter's microphone input:



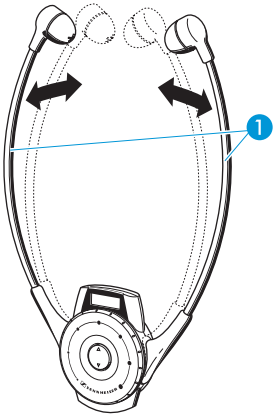
▶ Set the MUTE switch 2 to the position "MUTE".
The red LED LOW BATT/MUTE 7 lights up permanently. The MIC level display ④ no longer shows any deflection. The transmitter's microphone input is muted.

Note:
The muting function (MUTE) mutes the microphone input 3 but not the line input ④. This function enables a pre-recorded track to be played through the line input without being disturbed by the tour guide's microphone. When the track has finished, the guide can un-mute the microphone and continue talking.



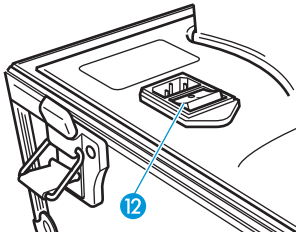
To deactivate the muting function:

▶ Set the MUTE switch 2 back to the right.
The red LED LOW BATT/MUTE 7 goes off. The MIC level display ④ and the LINE level display ⑤ indicate the current levels.



Automatically switching the receiver on/off

The receiver automatically switches on when you pull the earbows 1 apart. When you release the earbows 1, the receiver switches to stand-by mode (audio deactivated) and then switches off after two minutes.



Switching the charging case on/off

To switch the charging case on:

▶ Set the mains switch 12 to the position "I".
The LED POWER 6 lights up.

To switch the charging case off:

▶ Set the mains switch 12 to the position "0".
The LED POWER 6 goes off.

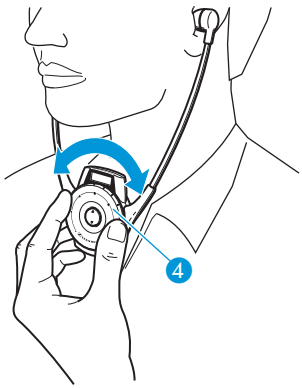
Note:
Unplug the charging case from the mains when not in use for extended periods of time.

Adjusting the volume

Volume up? – NO!

When people use headphones, they tend to choose a higher volume than with loudspeakers. Listening at high volume levels for long periods can lead to permanent hearing defects. Please protect your hearing, Sennheiser headphones have an excellent sound quality even at low volumes.

Adjusting the volume on the receiver



▶ Use the volume control 4 to adjust the volume so that you can hear the speaker's voice loud and clear.

Note:

The volume control 4 has no end stop, i.e. you can turn it endlessly to the left or right.

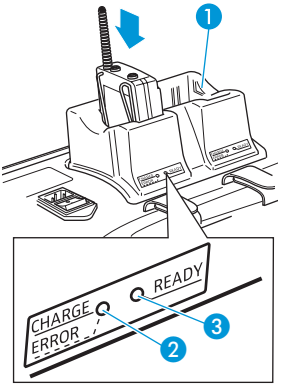
Charging the rechargeable batteries

Caution!

- Only use the charging case for charging the SK 2020 D transmitter, the HDE 2020 D stethoset receivers and the BA 2015 accupack.
- Never try to charge other rechargeable batteries or non-rechargeable batteries.

Charging the BA 2015 accupack

For charging, the BA 2015 accupack can remain in the transmitter.



▶ Place the transmitter with the accupack inserted into the charging compartment for accupack/transmitter 1 as shown in the diagram on the left. (Alternatively, you can remove the accupack from the transmitter and insert it into the charging compartment on its own – both charging compartments are identical and can charge the occupied either in or out of the transmitter.)

When placed into a charging compartment, the transmitter automatically switches off. The red LED CHARGE 2 of the charging compartment lights up.

Charging a completely discharged accupack takes approx. 3½ hours at room temperature. It is normal for the accupacks to get hot during charging.

However, the charging process may take longer if:

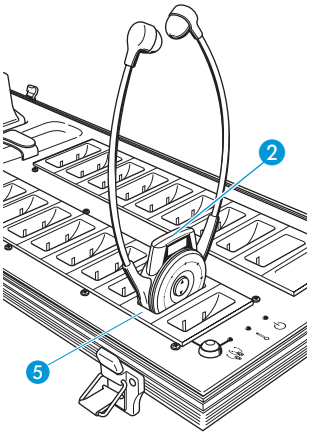
- the accupack is deep-discharged and first has to be reconditioned by a deep discharge recovery charge,
- the ambient temperature is close to or over 40 °C, since, in order to protect the accupack, the charging process will be interrupted until the temperature has dropped to a safe level.

After the accupack has been fully charged, the green LED READY 3 lights up.

Notes:

- For safety reasons, each charging process will be interrupted after 4 hours.
- When not using the BA 2015 accupack for extended periods of time, charge it about every three to six months.

Charging the receivers' built-in rechargeable batteries



▶ Place the receiver into one of the charging compartments for receivers (slaves) 5.
The LED 2 lights up (see table).

Color of LED	Meaning
red	The built-in rechargeable battery is being charged.
green	The built-in rechargeable battery is fully charged.
red (flashing)	The temperature of the built-in rechargeable battery is over 43 °C or below 3 °C.
yellow/ orange	The built-in rechargeable battery is defective. Interrupt the charging process and contact your Sennheiser agent.

Charging a completely discharged rechargeable battery takes approx. 2½ hours at room temperature.

However, the charging process may take longer if:

- the rechargeable battery is deep discharged and first has to be reconditioned by a deep discharge recovery charge,
- the temperature of the built-in rechargeable battery is over 43 °C or below 3 °C, since, in order to protect the rechargeable battery, the charging process will be interrupted until the temperature is again within the admissible range (the LED 2 flashes red).

After the built-in rechargeable battery has been fully charged, the LED 2 lights up green.

Notes:

- An additional temperature protection prevents overheating inside the charging case. If the temperature inside the charging case exceeds safety limits, the charging process will be interrupted and will only be restarted when the charging case has cooled down.
- When not using the receivers for extended periods of time, charge them about every six months in order to prevent deep discharge damage to the rechargeable batteries.

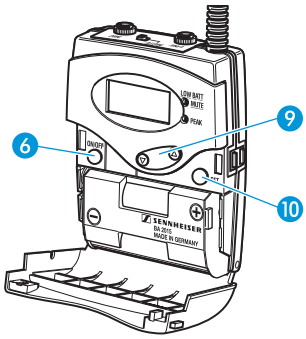
Setting a channel

To set the complete system to a certain channel, proceed as follows:

1. Set the transmitter to the desired channel (see "Setting the transmission channel" on page 30).
2. Set one of the receivers to the same channel (see "Setting the receiver channel" on page 31).
3. Automatically set all other receivers to the same channel using the channel copy function (see "Setting the receiver channel(s) using the channel copy function" on page 32).

Setting the transmission channel

To set the transmitter to the desired channel, use the transmitter's operating menu. An overview of the transmitter's operating menu is given on page 41.



- ▶ Make sure that the lock mode is deactivated (see "Activating/deactivating the lock mode" on page 37).
- ▶ Press the SET button ⑩.

  The operating menu appears and the first menu "CHAN" flashes on the display.
- ▶ Press the SET button ⑩.

  The current channel flashes on the display.
- ▶ Select a different channel by pressing the ▲/▼ rocker button ⑨.

  By pressing the position ▲ (UP) of the ▲/▼ rocker button ⑨, the display jumps to the next channel; by pressing the position ▼ (DOWN) of the ▲/▼ rocker button ⑨, the display jumps to the previous channel.

  By pressing and holding the ▲/▼ rocker button ⑨, the display cycles continuously (repeat function).

▶ Press the SET button ⑩ to permanently store the selected channel.

"STORED" briefly appears on the display. The transmitter now transmits on the selected channel. The last menu selected is shown on the display.

To exit the operating menu:

▶ Select the "EXIT" menu by pressing the ▲/▼ rocker button ⑨ and press the SET button ⑩.

The standard display is shown.

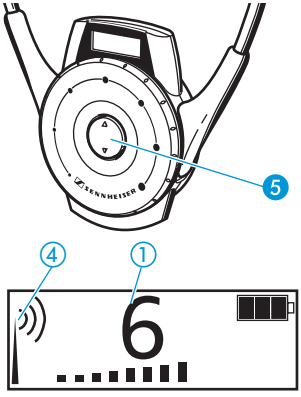
Or:

▶ Repeatedly press the ON/OFF button ⑥ until the standard display is shown.

Setting the receiver channel

In order for the receiver to receive the transmitter signal, both transmitter and receiver have to be set to the same channel.

To manually set the receiver channel:



▶ Press the ▲/▼ rocker button for channel selection ⑤.

The selected channel is shown on the channel display ①.

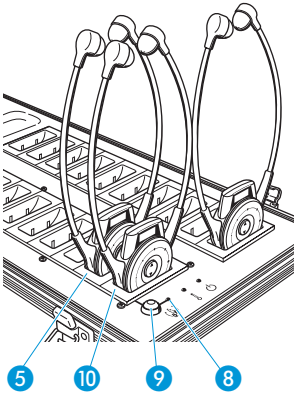
If the transmitter is transmitting on this channel, the receiver's RF signal indication ④ indicates the field strength of the received RF signal.

Notes:

- By pressing and holding the ▲/▼ rocker button for channel selection ⑤, the display cycles continuously (repeat function).
- After channel 6, the display will return to channel 1.

Setting the receiver channel(s) using the channel copy function

The channel copy function lets you simultaneously set a maximum of 19 receivers in the charging case to the same channel. This is achieved by copying the current channel of the receiver placed into the charging compartment with channel copy function (master) ⑩ to all other receivers in the charging case.



- ▶ Place all receivers which are to be set to the same channel into the charging compartments for receivers (slaves) ⑤.
- ▶ Switch on the receiver whose channel you want to copy.
- ▶ Place this receiver into the charging compartment with channel copy function (master) ⑩. The receiver must be switched on.
  The LED COPY AVAILABLE ⑧ lights up green as long as the channel copy function is available.
- ▶ Press the COPY button ⑨ to start the channel copy function.
  The LC displays of all receivers which are successfully set to the same channel light up.

Notes:

- If the receivers' built-in rechargeable batteries are not discharged, you can use the channel copy function even when the charging case is not connected to the mains.
- If you do not press the COPY button ⑨ on the receiver placed into the charging compartment with channel copy function (master) ⑩, the receiver automatically switches off after approx. two minutes.

Using several Tourguide systems simultaneously

The Tourguide System 2020 D is supplied preset to six selectable frequencies that will all work together with each other. You can therefore have up to six separate tours operating together in the same area.

All the supplied frequencies are intermodulation-free and will work together.

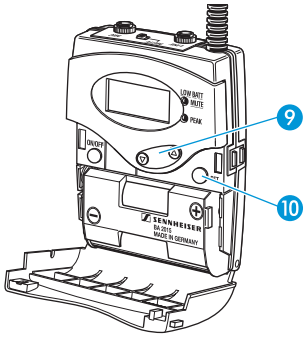
However, we cannot guarantee freedom of interference from external sources – if you do experience interference (and are using less than six systems together) please try selecting a different preset frequency.

Special transmitter settings

The following special settings can only be made via the transmitter's operating menu. An overview of the transmitter's operating menu is given from page 41 onwards.

Switching the line input on/off

You can connect an audio source such as a CD player, MP3 player, etc. to the transmitter's line input. If you have connected an audio source, you then have to switch on the line input as follows:



- ▶ Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- ▶ Repeatedly press the ▲/▼ rocker button ⑨ until "LINE" flashes on the display.
- ▶ Press the SET button ⑩.
  If the line input is switched off, "LINE.OFF" flashes on the display; if the line input is switched on, "LINE.ON" flashes on the display.
- ▶ Press the ▲/▼ rocker button ⑨ to change the setting.

▶ Press the SET button ⑩ to permanently store the setting.

"STORED" briefly appears on the display.

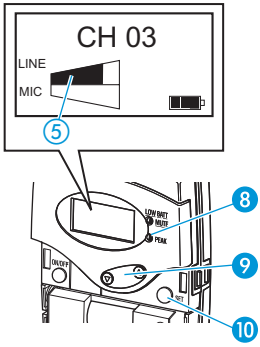
▶ Adjust the sensitivity of the line input to match the connected audio source as described in the following section.

Changing the sensitivity of the line input

To adjust the sensitivity of the line input to match the connected audio source:

▶ Make sure that the line input is switched on (see previous section).

▶ Connect the external audio source, switch it on and start playback.



▶ Press the SET button ⑩.

The operating menu appears and the first menu "CHAN" flashes on the display.

▶ Repeatedly press the ▲/▼ rocker button ⑨ until "SENSIT" flashes on the display and the LINE level display ⑤ appears.

▶ Press the SET button ⑩.

The current input sensitivity and the LINE level display ⑤ appear on the display.

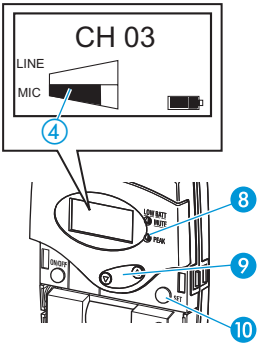
▶ Press the ▲/▼ rocker button ⑨ to change the input sensitivity so that the LINE level display ⑤ shows full deflection during the loudest passages, but the yellow LED PEAK ⑧ never lights up.

▶ Press the SET button ⑩ to permanently store the setting.

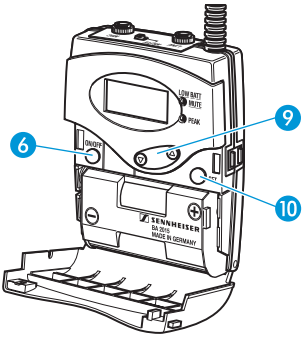
"STORED" briefly appears on the display, indicating that the sensitivity of the line input has been stored.

Changing the sensitivity of the microphone input

To adjust the sensitivity of the microphone input to match the connected microphone:



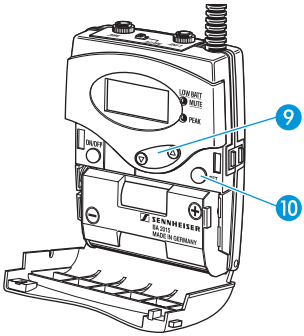
- Connect the microphone, position it correctly (refer to the microphone's operating manual) and speak into the microphone as usual.
- Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- Repeatedly press the ▲/▼ rocker button ⑨ until "SENSIT" flashes on the display and the MIC level display ④ appears.
- Press the SET button ⑩.
  The current input sensitivity and the MIC level display ④ appear on the display.
- Press the ▲/▼ rocker button ⑨ to change the input sensitivity so that the MIC level display ④ shows full deflection during the loudest passages, but the yellow LED PEAK ⑧ never lights up.
- Press the SET button ⑩ to permanently store the setting.
  "STORED" briefly appears on the display, indicating that the sensitivity of the microphone input has been stored.



Displaying the transmission frequency

To display the transmission frequency assigned to the current channel:

- ▶ Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- ▶ Repeatedly press the ▲/▼ rocker button ⑨ until "FREQ" flashes on the display.
- ▶ Press the SET button ⑩.
  The transmission frequency assigned to the current channel appears on the display. You cannot change this transmission frequency.
- ▶ Press the ON/OFF button ⑥ or the SET button ⑩ to return to the operating menu.



Loading the factory-preset default settings

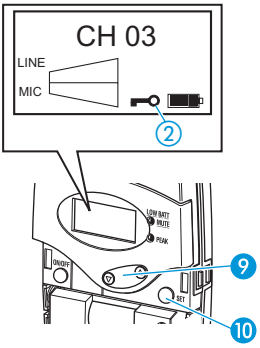
To load the transmitter's factory-preset default settings:

- ▶ Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- ▶ Repeatedly press the ▲/▼ rocker button ⑨ until "RESET" flashes on the display.
- ▶ Press the SET button ⑩.
  "RST.OK" flashes on the display.
- ▶ Press the SET button ⑩ to load the factory-preset default settings.
  "DONE" briefly appears on the display. The transmitter is reset to the following factory-preset default settings:
  - Channel: 1
  - Line input: switched off
  - Input sensitivity
    - Line input: –24 dB
    - Microphone input: –36 dB
  - Lock mode: deactivated
  - Infra-red service interface: deactivated

Activating/deactivating the lock mode

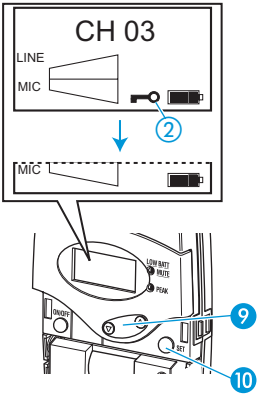
The lock mode prevents the transmitter from being accidentally programmed or switched off during operation.

To activate the lock mode:

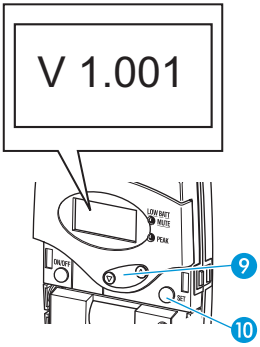


- Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- Repeatedly press the ▲/▼ rocker button ⑨ until "LOCK" flashes on the display.
- Press the SET button ⑩.
  "LOC.OFF" flashes on the display.
- Press the ▲/▼ rocker button ⑨.
  "LOC.ON" flashes on the display.
- Press the SET button ⑩ to activate the lock mode.
  "STORED" briefly appears on the display, indicating that the lock mode has been activated. The lock mode icon ② is displayed on the standard display.

To deactivate the lock mode:



- Press the SET button ⑩.
  "LOC.ON" flashes on the display.
- Press the ▲/▼ rocker button ⑨.
  "LOC.OFF" flashes on the display.
- Press the SET button ⑩ to deactivate the lock mode.
  "STORED" briefly appears on the display, indicating that the lock mode has been deactivated. The lock mode icon ② is no longer displayed on the standard display.

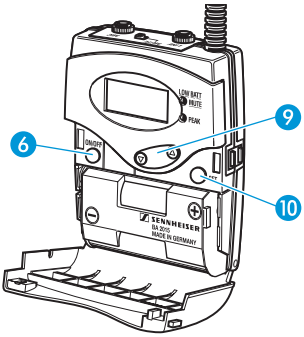


Displaying the version number

To display the version number of the operating system installed:

- ▶ Press the SET button ⑩.
  The operating menu appears and the first menu "CHAN" flashes on the display.
- ▶ Repeatedly press the ▲/▼ rocker button ⑨ until "SERVIC" flashes on the display.
- ▶ Press the SET button ⑩.
  The version number is displayed.

The operating menu of the transmitter



Working with the transmitter's operating menu

To get into the operating menu:

- Make sure that the lock mode is deactivated (see "Activating/deactivating the lock mode" on page 37).
- Press the SET button 10.
  The operating menu appears and the first menu "CHAN" flashes on the display.

To select a menu:

- Repeatedly press the ▲/▼ rocker button 9 until the desired menu flashes on the display.
- Press the SET button 10.

To change a menu:

- Press the ▲/▼ rocker button 9.

To store a setting:

- Press the SET button 10.

To exit the operating menu:

Note:
If you do not press a button for more than 30 seconds, the transmitter automatically returns to the standard display.

- Select the "EXIT" menu by pressing the ▲/▼ rocker button 9 and press the SET button 10.
  The standard display is shown.

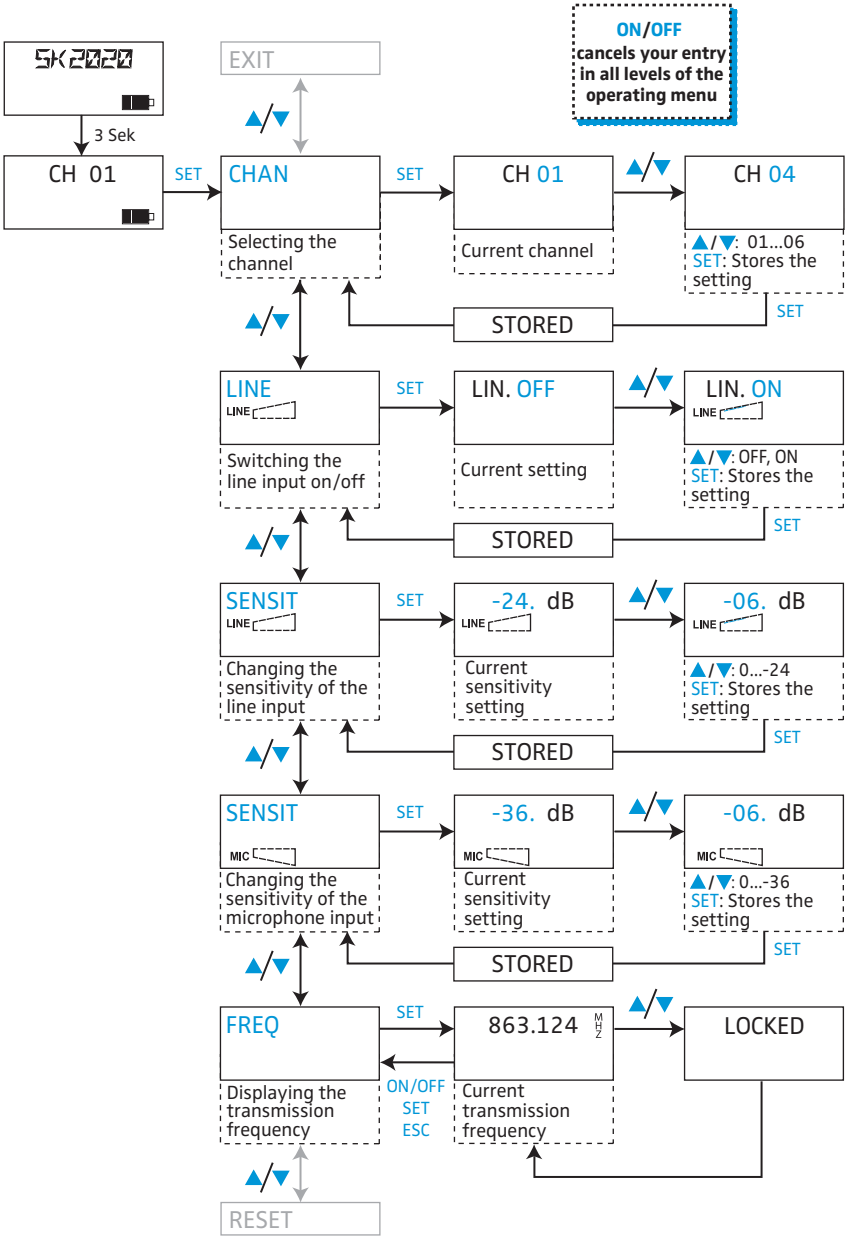
Or:

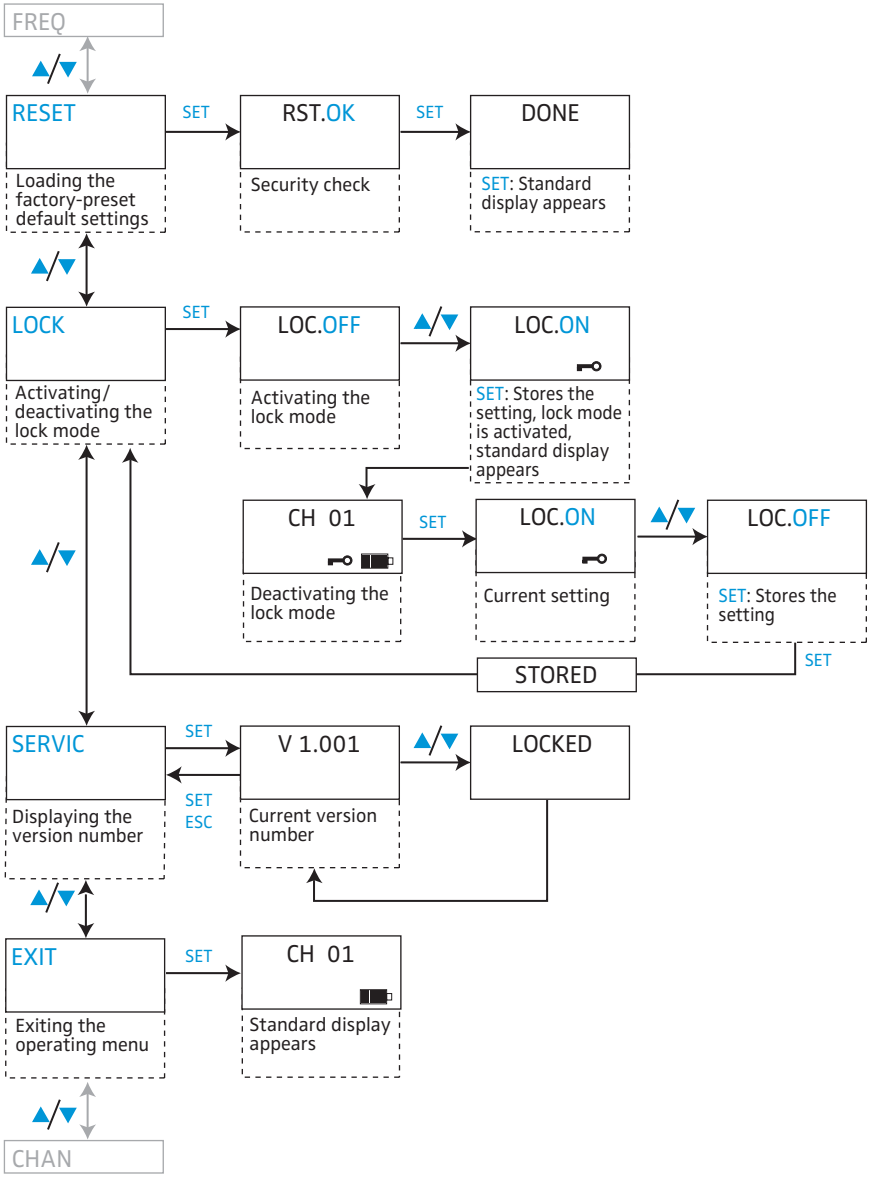
- Repeatedly press the ON/OFF button 6 until the standard display is shown.

The transmitter's operating menu contains the following menus:

Menu	Function of the menu
CHAN	Selecting a channel (see page 30)
LINE	Switching the line input on/off (see page 33)
SENSIT (LINE)	Changing the sensitivity of the line input (see page 34)
SENSIT (MIC)	Changing the sensitivity of the microphone input (see page 35)
FREQ	Displaying the frequency of the current channel (see page 36)
RESET	Loading the factory-preset default settings (see page 36)
LOCK	Activating/deactivating the lock mode (see page 37)
SERVIC	Displaying the version number (see page 38)
EXIT	Exiting the operating menu (see page 39)

Overview of the operating menu




FREQ
RESET
SET
RST.OK
SET
DONE
Loading the factory-preset default settings
Security check
SET: Standard display appears
LOCK
SET
LOC.OFF
LOC.ON
Activating/ deactivating the lock mode
Activating the lock mode
SET: Stores the setting, lock mode is activated, standard display appears
CH 01
SET
LOC.ON
LOC.OFF
Deactivating the lock mode
Current setting
SET: Stores the setting
SET
STORED
SERVIC
SET
V 1.001
LOCKED
SET
ESC
Displaying the version number
Current version number
EXIT
SET
CH 01
Exiting the operating menu
Standard display appears
CHAN

Care and maintenance

Only clean the Tourguide System 2020 D when it is switched off and unplugged. Use a soft and dry cloth. Do not use any cleansing agents or solvents as these can damage the surfaces of the Tourguide System 2020 D.

If problems occur...

Problem	Possible cause	Possible solution
No operation indication on the transmitter	Batteries are flat or accupack is flat	Replace the batteries or recharge the accupack (see page 28)
No radio waves on the receiver display	No RF signal, transmitter and receiver are not on the same channel	Set transmitter and receiver to the same channel (see page 31)
	No RF signal, transmitter is out of range	Reduce the distance between receiver and transmitter
	Transmitter is in energy saving mode (see page 15)	Check the signal source
RF signal available, no audio signal, the red LED LOW BATT/ MUTE 7 lights up	Transmitter is muted (MUTE)	Deactivate the muting function (see page 25)
Audio signal is distorted	Transmitter sensitivity is adjusted too high	Change the sensitivity of the microphone input (see page 35) or line input (see page 34)
Operating time of the transmitter is drastically reduced	Normal ageing or damage of BA 2015 accupack	Replace the BA 2015 accupack
Operating time of the receivers is drastically reduced	Normal ageing or damage of rechargeable batteries	Have the rechargeable batteries replaced by a Sennheiser Service Department
Occasional drop outs in the audio signal	Distance to the transmitter is too great	Reduce the distance to the transmitter
	Interference is being received from an external source	Change the system to a different channel
	Interference is being received from a second transmitter	Change the transmitters to different channels

If problems occur that are not listed in the above table or if the problems cannot be solved with the proposed solutions, please contact your local Sennheiser agent for assistance.

Specifications

SK 2020 D bodypack transmitter (Cat. No. 500548)

Modulation	2 FSK (46K0F1D)
Frequency range	863–865 MHz
Channels	6
Frequency response	100–7,000 Hz
Max. input voltage at mic/line input	Microphone: 650 mV_{rms} (sensitivity –36 dB) Line: 2 V_{rms} (sensitivity –24 dB)
Operating time	typ. 8 hrs
Power supply	BA 2015 accupack, 2.4 V or 2 AA size batteries, 1.5 V
Ambient temperature	0–50 °C
Dimensions	approx. 82 x 64 x 24 mm
Weight (incl. BA 2015 accupack)	approx. 160 g

HDE 2020 D stethoset receiver (Cat. No. 500543)

Modulation	2 FSK
Frequency range	863–865 MHz
Channels	6
Frequency response	100–7,000 Hz
Sound pressure level at 1 kHz	max. 120 dB SPL
THD at 1 kHz	< 1 %
Operating time	typ. 8 hrs
Power supply	Lithium-polymer rechargeable battery, 830 mAh
Ambient temperature	0–50 °C
Dimensions	approx. 245 x 125 x 20 mm
Weight	approx. 70 g

EZL 2020-20 L charging case (Cat. No. 500542)

Ambient temperature during charging	0–40 °C
Mains voltage	100–240 VAC (50/60 Hz)
Primary power consumption	max. 70 W
Charging voltage for HDE 2020	4.7–5.5 V
Charging current per charging compartment for HDE 2020	typ. 400 mA
Charging time HDE 2020	approx. 2.5 hrs
Charging voltage for SK 2020 / BA 2015	typ. 2.0–3.4 V
Charging current per charging compartment for SK 2020 / BA 2015	typ. 500 mA
Charging time SK 2020 / BA 2015	approx. 3.5 hrs
Overload threshold for SK 2020 / BA 2015	typ. 3.9 V
Dimensions	approx. 600 x 270 x 380 mm
Weight (empty)	approx. 8300 g

The devices comply with the following standards:

Radio:	ETSI EN 301357-1/-2, class 1
EMC:	ETSI EN 301489-1/-9, EN 55103-1/-2
Safety:	EN 60065

Frequency range 863–865 MHz, approved in:
A, B, BG, CH, CY, CZ, D, DK, E, EST, F, FIN, FL, GB, GR, H, HR, I, IRL, IS, L, LT, LV, M, N, NL, P, PL, S, SK, SLO, TR.

Accessoires

Product name	Product description	Cat. No.
HDE 2020 D	Stethoset receiver	500543
-	Earbuds for HDE 2020 D stethoset receiver	451623
SK 2020 D	Transmitter	500548
EZL 2020-20 L	Charging case	500542
BA 2015	Accupack	009950
CL 2	Microphone cable	004840
CL 1	Connecting cable for external audio devices (line input)	005022
ME 2-N	Clip-on microphone	005018
ME 4-N	Clip-on microphone	005020
MKE 2-EW GOLD	Clip-on microphone	009831
ME 3-N	Headmic	005019
HSP 2-EW	Headmic	009866
HSP 4-EW	Headmic	009867
HS 2-EW	Headmic	-
e 815	Hand-held microphone with connecting cable	009425
e 25	Hand-held microphone with connecting cable	004511
e 835	Hand-held microphone with connecting cable	004513
e 840	Hand-held microphone with connecting cable	009894
e 845	Hand-held microphone with connecting cable	004515
EU mains cable	Mains cable with EU plug, 2.5 m, black	054324
UK mains cable	Mains cable with UK plug, 2.5 m, black	054325
US mains cable	Mains cable with US plug, 2.5 m, black	057256

Manufacturer declarations

Warranty regulations

The guarantee period for this Sennheiser product is 24 months from the date of purchase. Excluded are accessory items, rechargeable or disposable batteries that are delivered with the product; due to their characteristics these products have a shorter service life that is principally dependent on the individual frequency of use.

The guarantee period starts from the date of original purchase. For this reason, we recommend that the sales receipt be retained as proof of purchase. Without this proof (which is checked by the responsible Sennheiser service partner) you will not be reimbursed for any repairs that are carried out.

Depending on our choice, guarantee service comprises, free of charge, the removal of material and manufacturing defects through repair or replacement of either individual parts or the entire device. Inappropriate usage (e.g. operating faults, mechanical damages, incorrect operating voltage), wear and tear, force majeure and defects which were known at the time of purchase are excluded from guarantee claims. The guarantee is void if the product is manipulated by non-authorised persons or repair stations.

In the case of a claim under the terms of this guarantee, send the device, including accessories and sales receipt, to the responsible service partner. To minimise the risk of transport damage, we recommend that the original packaging is used. Your legal rights against the seller, resulting from the contract of sale, are not affected by this guarantee.

The guarantee can be claimed in all countries outside the U.S. provided that no national law limits our terms of guarantee.

CE Declaration of Conformity

CE

This equipment is in compliance with the essential requirements and other relevant provisions of Directives 1999/5/EC, 89/336/EC or 73/23/EC. The declaration is available on the internet site at www.sennheiser.com.

Before putting the device into operation, please observe the respective country-specific regulations!

Batteries or rechargeable batteries

The supplied batteries or rechargeable batteries can be recycled. Please dispose of them as special waste or return them to your specialist dealer. In order to protect the environment, only dispose of exhausted batteries.

WEEE Declaration

Your Sennheiser product was developed and manufactured with highquality materials and components which can be recycled and/or reused. This symbol indicates that electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product by bringing it to your local collection point or recycling centre for such equipment. This will help to protect the environment in which we all live.

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Printed in Germany Publ. 08/06 516509 / A01